

Tributary Tribune

SERVICE YEAR 20
DISTRICT A, 2014
VOLUME 20 ISSUE 4



Stories and art by members of the
Watershed Stewards Program



The Watershed Stewards Program's (WSP) mission is to conserve, restore, and enhance anadromous watersheds for future generations by linking education with high quality scientific practices.



A program of the California Conservation Corps, WSP is one of the most productive programs for future employment in natural resources. WSP is administered by CaliforniaVolunteers and sponsored by the Corporation for National and Community Service.

The Tributary Tribune showcases the adventures, insights, and art of members of the Watershed Stewards Program. For twenty years WSP has been serving communities throughout California’s coastal watersheds. This issue features stories and art by members from Region I, District A, which extends from Yreka to Petrolia, CA.

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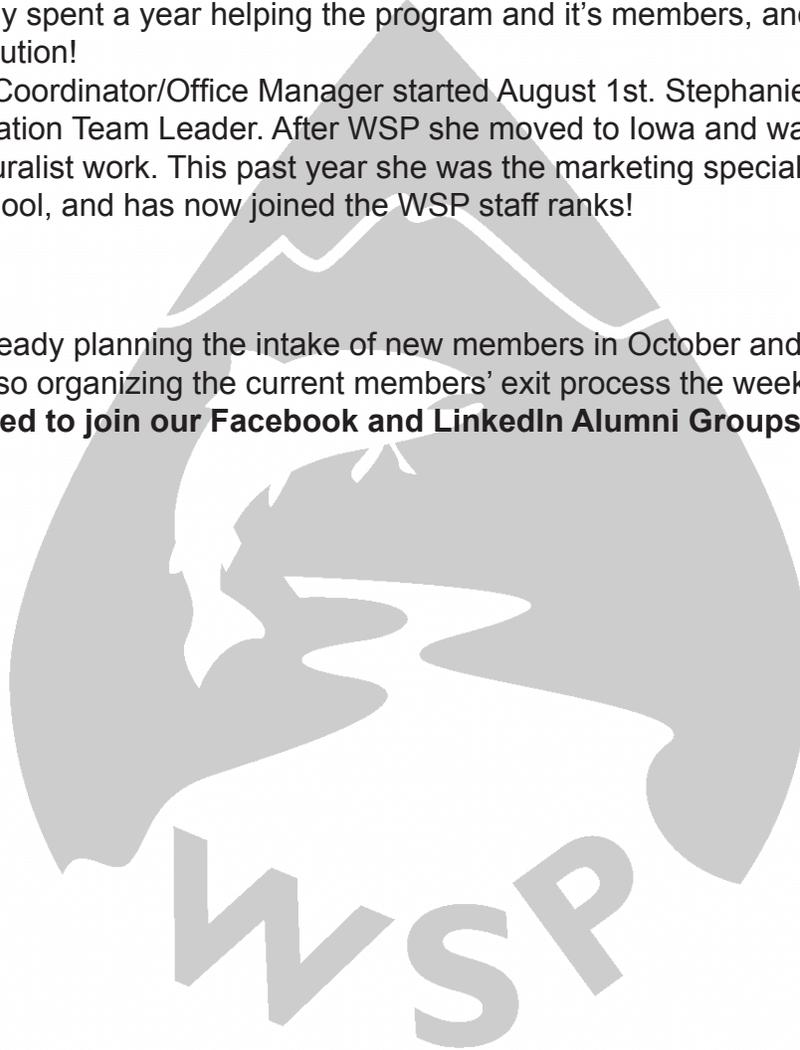
Front Cover Image: WSP and friends at the 12th Annual Fish Fair in Hoopa, CA.
Back Cover Image: CDFW Yreka’s ISP at Big Springs Ranch, CA.

WSP Program Updates

Year 21 Updates:

- The WSP's Member Coordinator, Emily Afriat-Hyman, has moved to Los Angeles to pursue a graduate degree. Emily spent a year helping the program and it's members, and WSP will forever be grateful for her contribution!
- The new Member Coordinator/Office Manager started August 1st. Stephanie Birmingham was the year 17 Education Team Leader. After WSP she moved to Iowa and was involved in management and naturalist work. This past year she was the marketing specialist for a Santa Cruz outdoor education school, and has now joined the WSP staff ranks!

The WSP is already planning the intake of new members in October and is looking forward to a new year while also organizing the current members' exit process the week of August 11th. **All alumni are encouraged to join our Facebook and LinkedIn Alumni Groups!**



Gyotaku

BY AMANDA LEE

PLACED AT USFS LOWER TRINITY

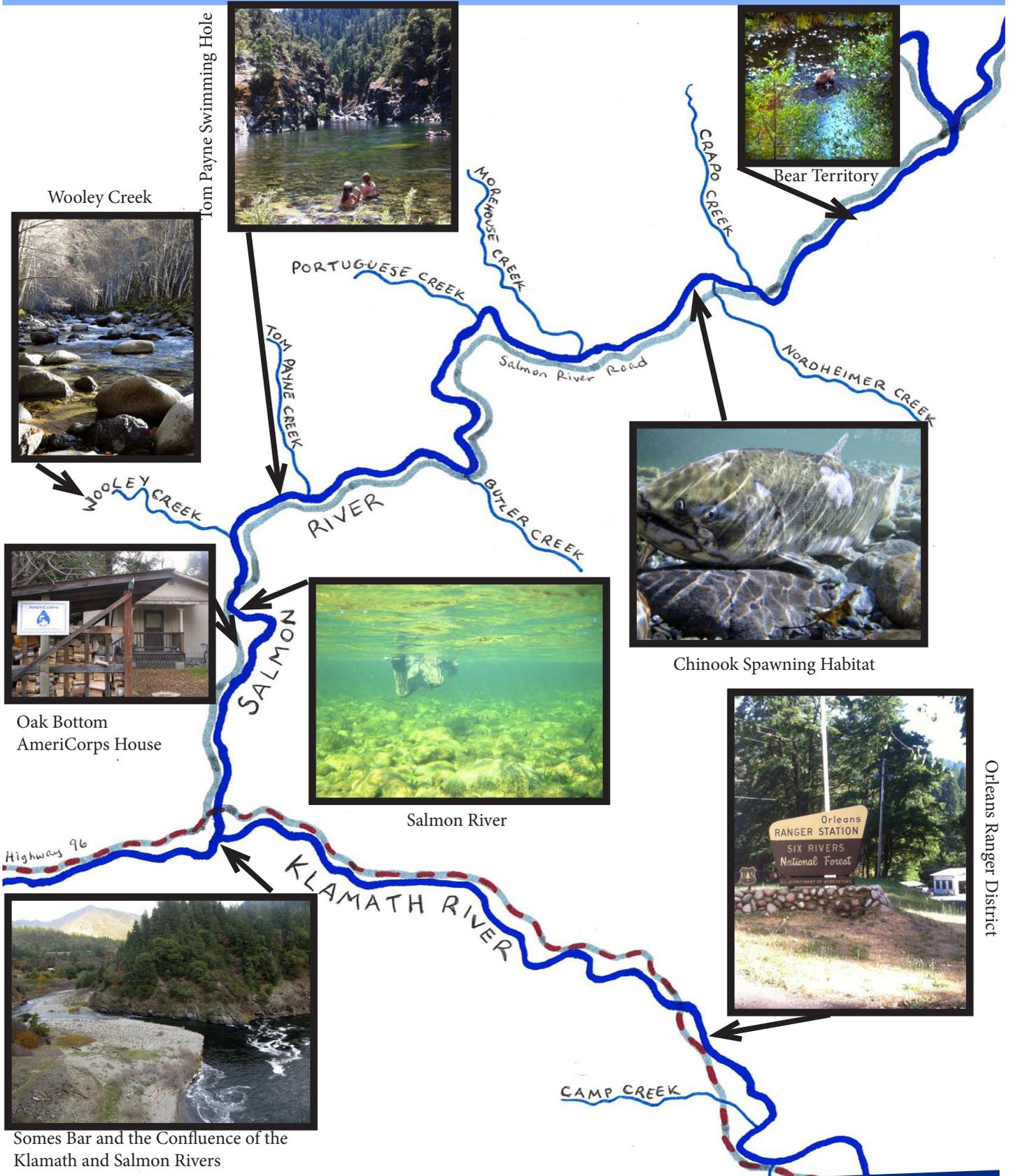
In the early 1800's fisherman would put ink on the fish they caught that day and press them on paper as a way to record the size and number of what they caught, and it became known as Gyotaku (fish rubbing). Today Gyotaku has become an art form of its own around the world.



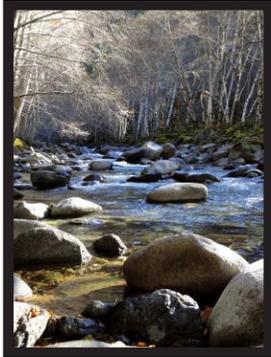
Carol's Guide to the Klamath and Salmon Rivers

BY CAROL EARNEST

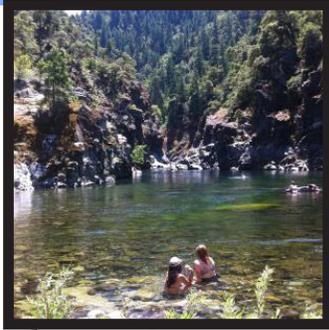
PLACED AT USFS ORLEANS



Wooley Creek



Tom Payne Swimming Hole



Bear Territory



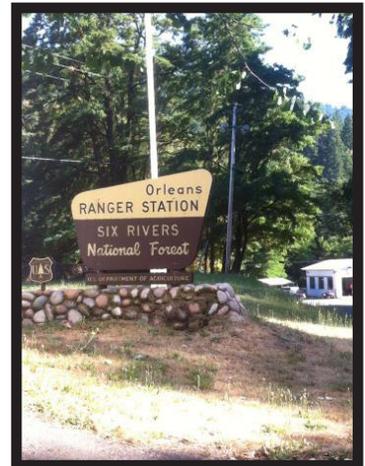
Chinook Spawning Habitat



Oak Bottom AmeriCorps House



Salmon River



Orleans Ranger District



Somes Bar and the Confluence of the Klamath and Salmon Rivers

With My Gaff, I Feel Safe

BY KERRY MCNAMEE
PLACED AT CDFW YREKA

Throughout the arduous fall and winter months of spawner ground survey season a variety of gear was bestowed upon me, all of which undoubtedly helped my survival. Items such as waders, felt bottomed boots, vests, gloves and sunglasses aided me in each day's endeavors, however one item stands above all others literally and figuratively: the almighty gaff (:oooh aaaah:). What is a gaff you may be wondering? A gaff is a long wooden pole, standing at about approximately 8 feet, with a metal hook on one end to help reach carcasses. Its purpose, besides reaching for carcasses, is to help the surveyor navigate through a variety of water laden landscapes (swift currents, murky waters, rocky terrain, slippery banks) as it acts as a sort of a third leg providing additional stability to the surveyor.

Countless times I have slipped on rocks, grasped my trusty gaff, and avoided a painful spill. A memory that sticks out in my mind is traversing the Shasta River on a crisp December day. The flow was probably at about 175 cubic feet per second, and in the small channel the water was flowing quite fast. A rapid was approaching, and my partner Paul told me to be careful on this one because it's quite a "doozy". I strategically placed my feet and gaff in areas to ensure my stability, which was tiresome and challenging due to the strong current trying to push me downstream. As I was halfway down the rapid, the current overpowered me and as I lost my footing the current pushed me downstream. I was on my back flowing with the water over the rocks. Luckily, I instinctively reached back and lo and behold, my gaff was lodged in between rocks awaiting my grip. I laid there for a second or two, holding onto my gaff, feeling the water flow swiftly below me. I felt like a flag billowing in the wind attached to its pole,

and I was grateful to be attached to my gaff (even though the rapid wasn't SO big).

This account is one of many in which I've been appreciative of the additional support my gaff has given me. While on surveys I would sometimes sing a ballad to thee gaff in the tune of Weezer's "In The Garage":

"With my gaff I feel safe, I know that I'll
keep my face

With my gaff I can do no wrong, as it helps
me trudge along

With...My... Gaff..."

Sure, my lack of surefootedness can attribute to my infatuation with the gaff, but what can I say? I'm hooked.



Salmonid Art

**BERLYNNA
HERES**
PLACED AT
CDFW YREKA

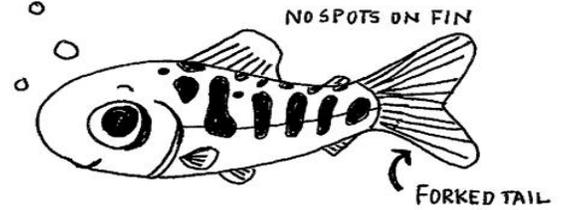


**ERICKA
AUGUSTYN**
PLACED AT
CDFW ARCATA

An Illustrated Guide to the
Common Fish Species
Found in the Downstream
Migrant Trap at
Camp Creek

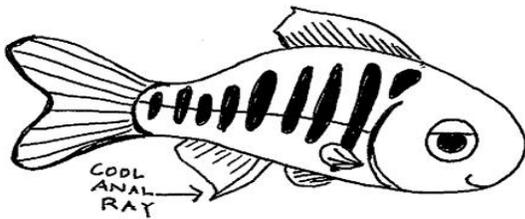
By: Sylvia Gwozdz
USFS Orleans Year 20

CHINOOK:



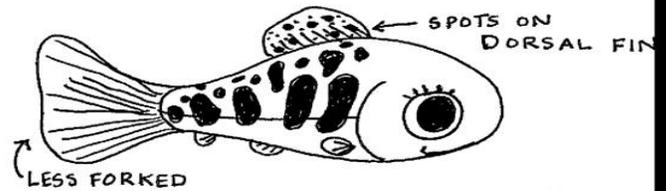
They're pretty cool, until your 500th one in a row.

COHO:



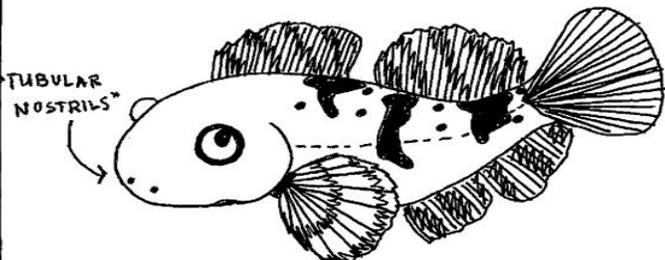
Just like all the others except the consequences
are much higher if anything goes wrong.

STEEL HEAD:



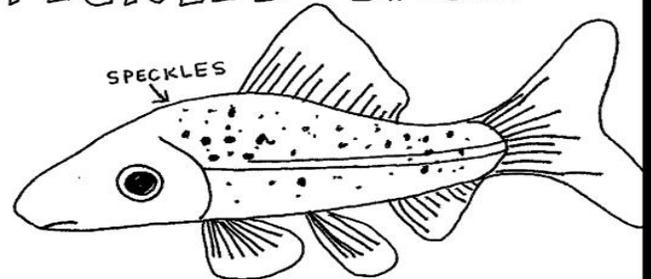
Little ones are cute, larger ones will launch them-
selves out of buckets and hit you in the face.

MARBLED SCULPIN:



Looks menacing and unfriendly but is relatively
harmless. Can be difficult to ID.

SPECKLED DACE:



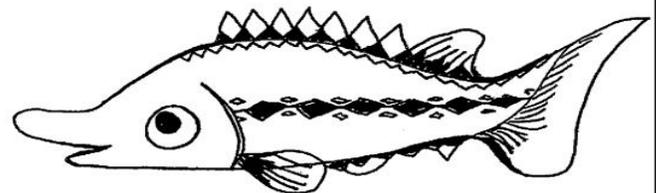
These will also splash you, as they can jump to
surprising heights for their size.

LAMPREY AMMOCOETE:



They swim like confused worms. Good luck trying
to lay one out to measure its fork length.

CUTE JUVENILE STURGEON:



(In my dreams)

Ye Old Book Review: Ravenel's Road Primer: For School Children

BY KEVIN PALM

PLACED AT USFS SO EUREKA

Well hello again my dear readers, today we have a true treat in store for us! The subject of this review has been hailed in this book as the “veins and arteries of our country”, so yes, you guessed it! Roads!

What is there not to say about the reading experience that is Ravenel's Road Primer? Upon lowering this manuscript I felt a bustle of enthusiasm for the industrial revolution. The primer includes a short summary of General Washington's lesser known repertoire as a transportation engineer to inspire the young reader, and the convenient single line question-answer sets at the end of each chapter practically conjure up the imagined snap and crack of a teacher's ruler stick.

Interestingly enough, however, between the calculations of road quality versus bales of cotton a team of horses can transport and complaints about the evils of buggy wheels (thin wheels wear deeper ruts), the underlying principles introduced are by and large still correct. Road building really hasn't changed that much in the past hundred years.

When refining a prospective stretch of land into a new road, the elevation profile is smoothed out by 'cutting' chunks of earth that are too tall and using that excess material to 'fill' spaces too low. A desire to draw a line straight from Point A to Point B is tempered by an aim to balance the material from the cutbank with the material going into the fillslope, for construction costs soar if you must transport dirt in or out. Drainage is essential, for with “the ill effects of poor drainage and the consequent evil results of a softened road bed and berms, the wear and tear of travel in wheeled vehicles is unceasingly at work”. A ditch shall exist along the inner side of a mountain road, diverting water away from the roadbed into the nearest natural waterbody through an ample sized culvert. The most preferable shape for a roadbed is to be 'crowned', where that a gradual hump following the center of the road sends water off the road by means of the shortest distance possible. Grade, or the change in elevation over time (i.e. steepness),

should be regulated so as to avoid accelerating water's movement along the road thus speeding up erosion, but also to prevent large flat areas which are difficult to drain and prone to becoming soggy mud pits.

So again, American road building hasn't changed that much. Mostly what's different now is we have a new reason for doing the same things. The paramount concern in road construction and maintenance is no longer just protecting the road to protect our funds, but also protecting the environment.

Conveniently, this distinction is usually very subtle. Some obvious exceptions exist: for instance, Mr. Ravenel's advice that oil glazing is a suitable means to keep the dust down is no longer in line with the guiding principles, and ditches are cleaned less frequently to allow some vegetation to hold dirt. But perhaps it will strike the reader as a comfort to know that a reasonable amount of environmental ills caused by poor road construction were in fact caused by poor road constructors.

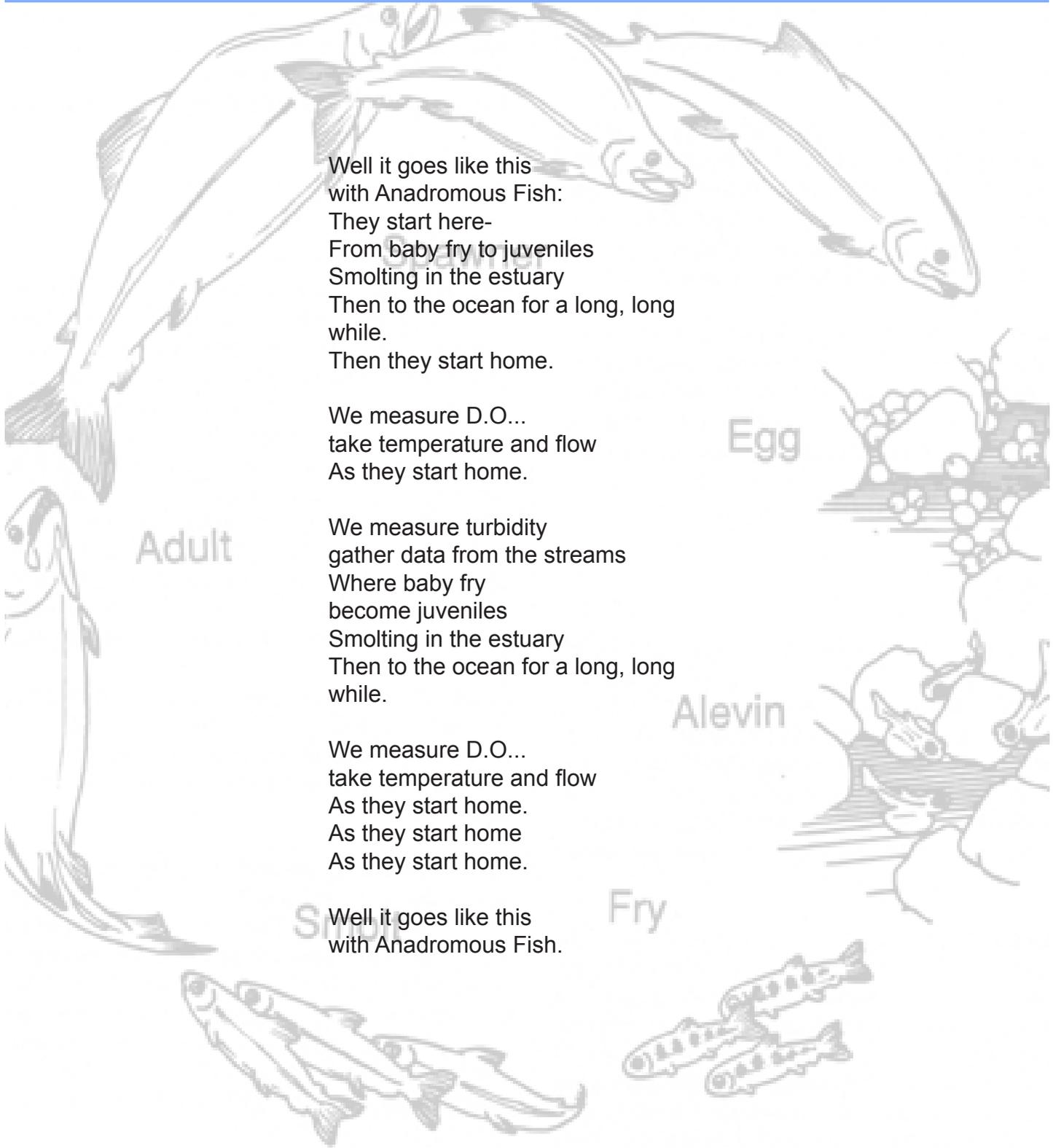
Ravenel's Road Primer: For School Children by Samuel W. Ravenel written in 1912 is available as a free eBook on Google.



Anadromous Fish Song

By SARAH STAWASZ

PLACED AT YUROK TRIBE ENVIRONMENTAL PROGRAM



Well it goes like this
with Anadromous Fish:
They start here-
From baby fry to juveniles
Smolting in the estuary
Then to the ocean for a long, long
while.
Then they start home.

We measure D.O...
take temperature and flow
As they start home.

We measure turbidity
gather data from the streams
Where baby fry
become juveniles
Smolting in the estuary
Then to the ocean for a long, long
while.

We measure D.O...
take temperature and flow
As they start home.
As they start home
As they start home.

Well it goes like this
with Anadromous Fish.

Egg

Alevin

Fry

Adult

Smolt

Our Adventures in Orleans...

BY SARA TANIS

PLACED AT USFS LOWER TRINITY

A rotary screw trap is used for sampling out migrating juvenile salmonids. This particular trap was visited every day, Monday-Friday, in order to remove debris and process catches. Together, with the USFS SO Eureka and USFS Orleans WSP members, we were able to install this trap in Camp Creek in just one day. Let the fun begin...

To keep things interesting, the rotary screw trap had to be installed in the actual stream and not on land. In that case, our entire crew had to work together to relocate the screw trap from the back of LeRoy Cyr's (USFS Orleans Mentor) truck into Camp Creek.



...the Installation of the Rotary Screw Trap in Camp Creek



Remember to always follow directions and listen to your mentor!

Never forget which side is Port and which is Starboard. This will come in handy when assembling the beams to the pontoons.



Lining everything up in the proper spot will ensure success!



Let the final stage begin, assembling the live box!



Last but not least, do not forget to tie down your trap!



Success!



Once the trap is in place and the cone has finally been lowered, it's time to kick back, relax, and spend some quality time with some good friends in the sunshine! A special thanks to all the WSP Forest Service members for making this day an awesome one!



Frank & Frances: A Love Story

BY WILLIE CLANCY

PLACED AT USFS SO EUREKA

Frances

You were born two redds away
In the Creek that some called Willow.
At first I rested in the gravel
Using my yolk-sac as a pillow.

Frank

I glanced upon your redd one day
And there emerged a school.
Though lovely fish were all about
You were clearly the prized jewel.

Frances

To be honest I began to notice you
When you were just a fry.
I hoped one day I could be your girl
And you could be my guy.

Frank

I became quite insecure
'Cus you got parr marks first.
I was so red in the face
I thought my operculum would burst.

Frances

You definitely had an awkward stage
But what made my heart jolt
Was when you were a parr no longer;
You had become a handsome smolt.

Frank

You had a set of supple fins
From your dorsal to your caudal.
I knew that if you wanted to,
You could be a fishy model.

I got the nerve to ask you out.
You said yes and I felt pure bliss
For I knew that I just scored a date
With the finest *Oncorhynchus*.



Frances

You took me to my favorite spots
From pools to near beaches.
I knew the scenery around this place
Bested all the anadromous reaches.

Frank

We spent the next couple of years
Hanging in glides, riffles, and pools.
Our friends would just laugh at us.
We were carefree, love-drunk fools.

Frances

When we began the journey down the stream
I admit that it was scary
For we knew that only some of us
Would see the estuary.

We voyaged through the fresh water
'Til it became brackish as can be,
Then out the mouth we exited
And began our life at sea.

Frank

We swam about the ocean
Saw all the fishy nations.
I protected you from sharks,
Nasty fish hooks, and cetaceans.

Frances

There were trying times throughout the years,
Nothing could rip the seam though.
I needed you always in my life
Like Marlin needed Nemo.

Frank

Ocean times couldn't last forever;
It was time to swim upstream.
But I wasn't frightened for a moment
Because you were on my team.

The river's water was moving fast
We tried to take it slow and steady.
Just when we thought it was too much
We found solace in an eddy.

Frances

We finally found some gentle water
With good gravel for my redd.
I knew I had to build it fast
For we were close to dead.

I turned my body to the side
And used my caudal as a scoop.
I laid my eggs and urged you on,
'Cus others were there to swoop.

Frank

I fought off all the other guys,
And had one more task to do.
I fertilized your eggs
For then life could start anew.

Frances

We didn't know quite what would happen
Once we were officially dead.
We'd heard that curious bipedals
Would rip the otoliths from our head.

Then they'd slice our precious fins
And shred off our best scales.
I couldn't help but wonder
From where this custom hails.

Frank

We knew we didn't have too long,
So we just held each other.
I knew that I would be a father
And that you would be a mother.



Why are the Starfish Dying

By KRISTIN BRAUN

PLACED AT YUOK TRIBE ENVIRONMENTAL PROGRAM

Starfish wasting disease or Sea star wasting syndrome is a disease that appears sporadically, causing mass mortality of affected starfish and has been ravaging at least 12 different species of starfish across the west coast. These sick starfish develop lesions on their bodies and begin to twist their arms into knots until they eventually fall off. The starfish are unable to regenerate new limbs and typically die within 24 hours.

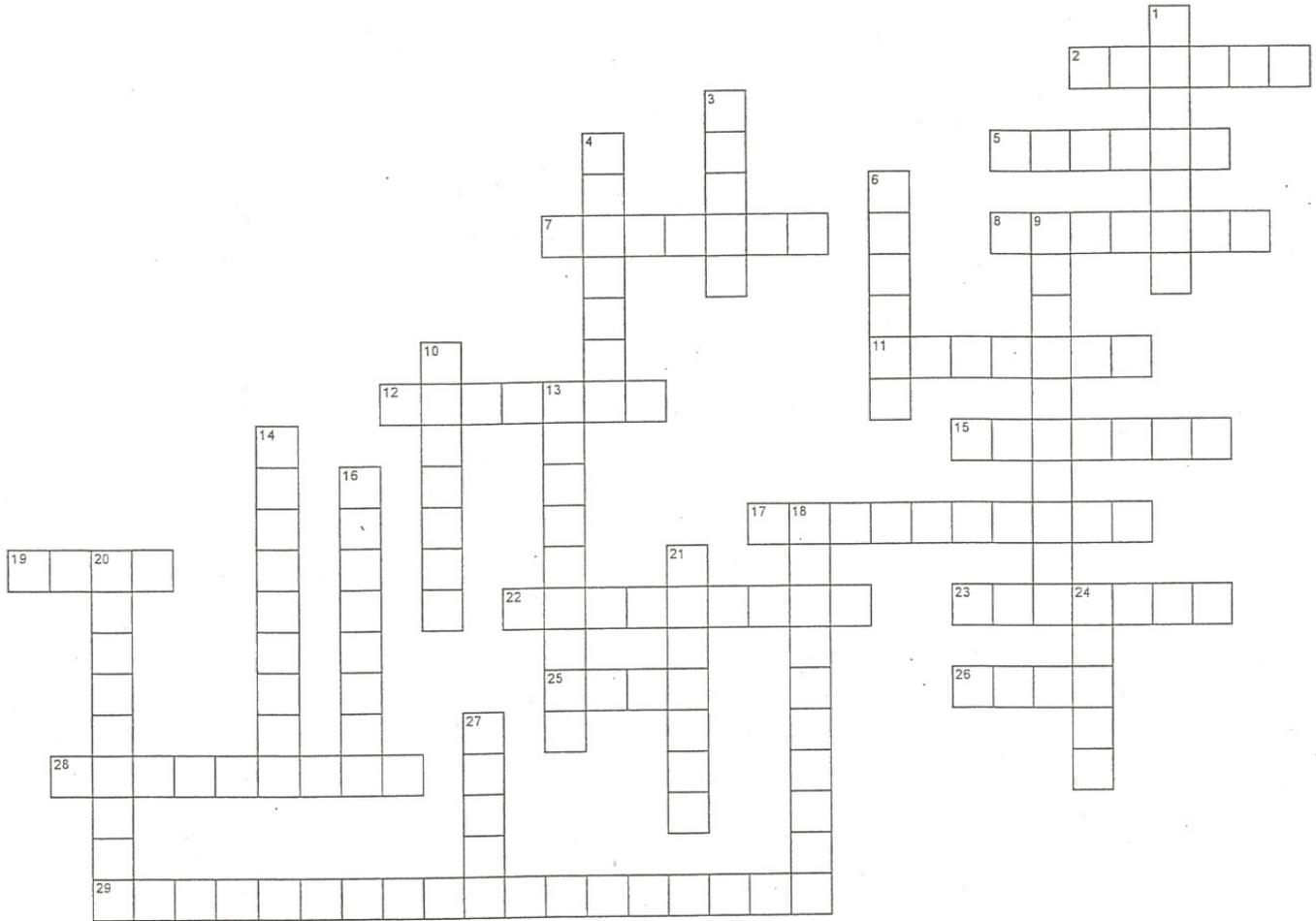
This brings me to share our story of the large scale Starfish event that occurred last February at the Wilson Creek outlet on DeMartins Beach a few miles north of our placement site in Klamath. The first report came in from a local stating that he had seen hundreds of dead Starfish at this beach. Sarah and I accompanied by our in-house Environmental Specialist, Dr. Suzanne Fluharty, went to investigate the sighting. I was not sure what to expect but was happy to get out into the field to assist in the exploratory mission. To our dismay the accounts of the helpful local was very true and the beach looked like a Starfish apocalypse. The bodies lay strewn about as if a battle had occurred and the Starfish lost the skirmish.

As Watershed Steward Project scientists in training this scene begged the question, what caused this event to occur?

Researchers are racing to figure out what exactly is wrong and minimize the damage. The cause of the sea star epidemic is still unknown, although scientists are narrowing their focus to a few potential suspects, including some type of pathogen, bacteria, or virus exasperated by the warming waters of the Pacific Ocean. Ultimately, the biologists have given the illness a name but have not determined where the disease originated or, nor devised a way to stop it. Monitoring and stopping the spread of the disease could help save marine ecosystems of North America, because starfish help prevent overpopulation of herbivores. Starfish eat sea urchins, which if too numerous can devour much of the kelp forests on the west coast. This is an epidemic and we need to find out why the star fish are dying and what the potential implications of action would be. For more information check out- www.sickstarfish.com



Fishy Puzzle
 BY RACHAEL IVERSON
 PLACED AT CDFW ARCATA



ACROSS

- 2 Needed to spawn and rear
- 5 With an egg sac
- 7 Line of lowest elevation
- 8 Where salmon species acclimate to tidal and saltwater environments
- 11 Detects vibrations: _____ line
- 12 A place to hide
- 15 Oldest fish alive today
- 17 31st state
- 19 A resting spot
- 22 Can spawn more than one time (iteroparity)
- 23 Riparian trees help prevent this
- 25 Spawning area
- 26 *Oncorhynchus kisutch*
- 28 Measure of water clarity
- 29 In stream fish food



DOWN

- 1 Food, water, shelter, air, and space
- 3 Reproduce
- 4 Conserve, restore, and _____
- 6 Area of high turbulence
- 9 Largest river in California
- 10 My gums are black
- 13 Small stream flowing into a bigger one
- 14 Drainage basin
- 16 Ratio of rise over run
- 18 Hatch and rear in fresh water, migrate to the ocean
- 20 Covers the gills
- 21 Helps maintain bouyancy: swim _____
- 24 Fish that has undergone physical changes to prepare for life in salt water
- 27 Semiaquatic mammal predator

**Answer key on page 21*

Alumni Spotlight!

JEMMA WILLIAMS

WSP Year(s): _____ Year 17 and 18 _____

Placement Site(s): __DFW Eureka and DFW Arcata/HFAC__

Mentor(s): Scott Bauer, Mike vanHatten (DFW Eureka). Teri Moore (DFW Arcata) Suzanne Isaacs(HFAC)

What was your WSP member experience like?

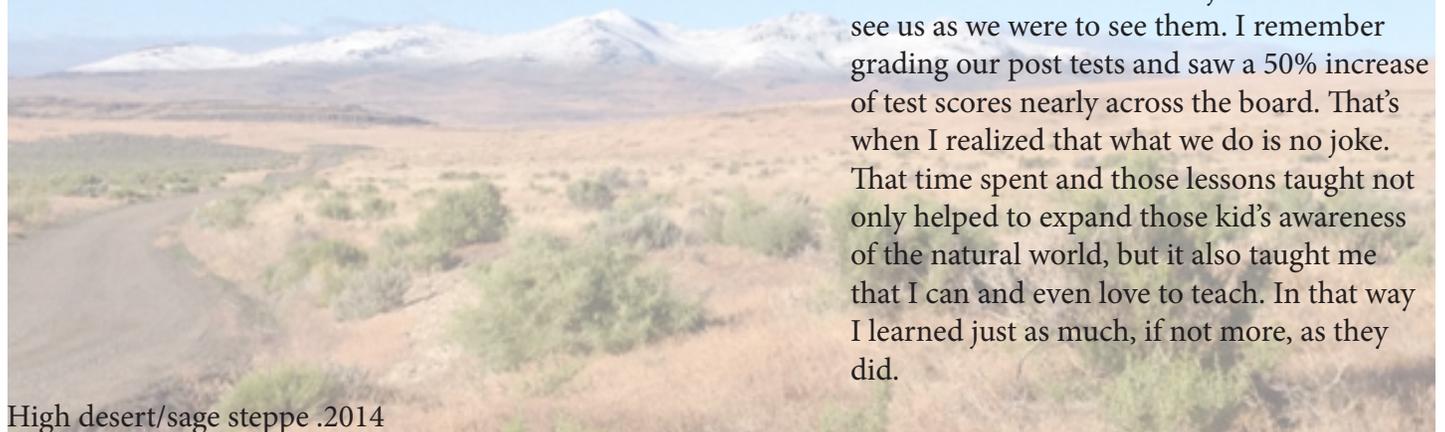
My WSP years were a blast! It allowed me to gain invaluable field experience and develop professionally in a manner that is unique to the WSP program. From long days working hard in the field, to the comradery had during our informative yet fun WSP trainings; WSP was an unforgettable experience. I truly enjoyed having the opportunity to learn from and work alongside Natural Resource professionals as well as with my peers. I came out of my two terms with a very eclectic resume and a range of experiences I will forever be grateful for.



Surveying ponds for Northern Red Legged Frog egg masses 2011

Was there one experience that was especially memorable? Why?

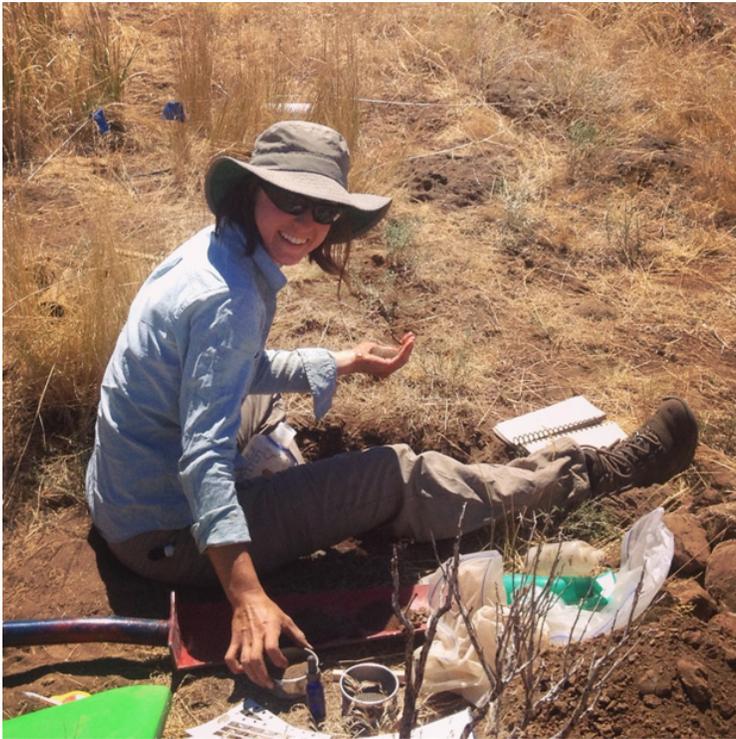
My first year was a bit of an adjustment. I had just graduated college, worked, traveled around Central America, and came back early to start WSP. I was restless. I remember struggling to find my groove professionally in the office and not constantly long to be solely in the field, as well as to sync with my site partner, someone I was suddenly with more than I was alone. I also found myself to be extremely nervous at the thought of teaching a classroom of little kids; I didn't think I'd be a good teacher. My site partner and I went bravely into our first Real Science lesson and I remember realizing just how much fun I was having about midway through. And by the third visit our kids were just as excited to see us as we were to see them. I remember grading our post tests and saw a 50% increase of test scores nearly across the board. That's when I realized that what we do is no joke. That time spent and those lessons taught not only helped to expand those kid's awareness of the natural world, but it also taught me that I can and even love to teach. In that way I learned just as much, if not more, as they did.



High desert/sage steppe .2014

What are your title and responsibilities in your current job?

I am currently an Assessment, Inventory, and Monitoring (AIM) Field Lead for the Great Basin Institute /partnered with the BLM. I lead a crew of technicians out to do a series of rangeland health assessments. We navigate (via Rig, UTVs, then hiking) to remote plots on BLM land and perform ecological measurements including but not limited to: vegetation type and cover, soil series and ecological site delineation, and hydrologic influences. These data are collected and used to better inform land management decisions made by the BLM.



Me at a plot playing soil scientist. 6-2014

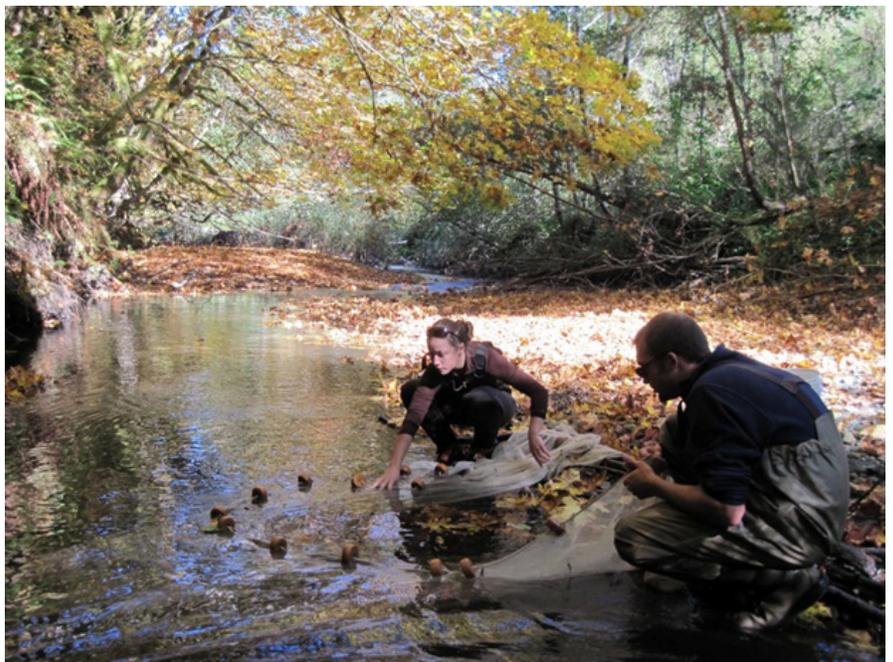


Western Toad in the Mad River during amphibian surveys. 2011

Seining Freshwater Creek 2012

How did WSP help prepare you for the work you are currently doing?

WSP helped me learn how to adapt to a wide variety of environments and audiences. The field work helped to toughen me up and gain skills, and the many volunteer work days and my ISP helped me learn the importance of networking, organization, and effective leadership.





Soil pit: texturing

What advice would you give current WSP members?

Network, network, network! Your resume will only get you so far, what will really help get you a job is your ability to adapt, engage and navigate professionally.

Take it all in, and remember to count your blessings. It is rare to be surrounded by such a large group of like-minded, young professionals. It probably won't happen again either, at least not like it does in WSP. Take notes, ask tons of questions, go the extra mile, have fun, take pictures, and always bring an extra pair of socks.

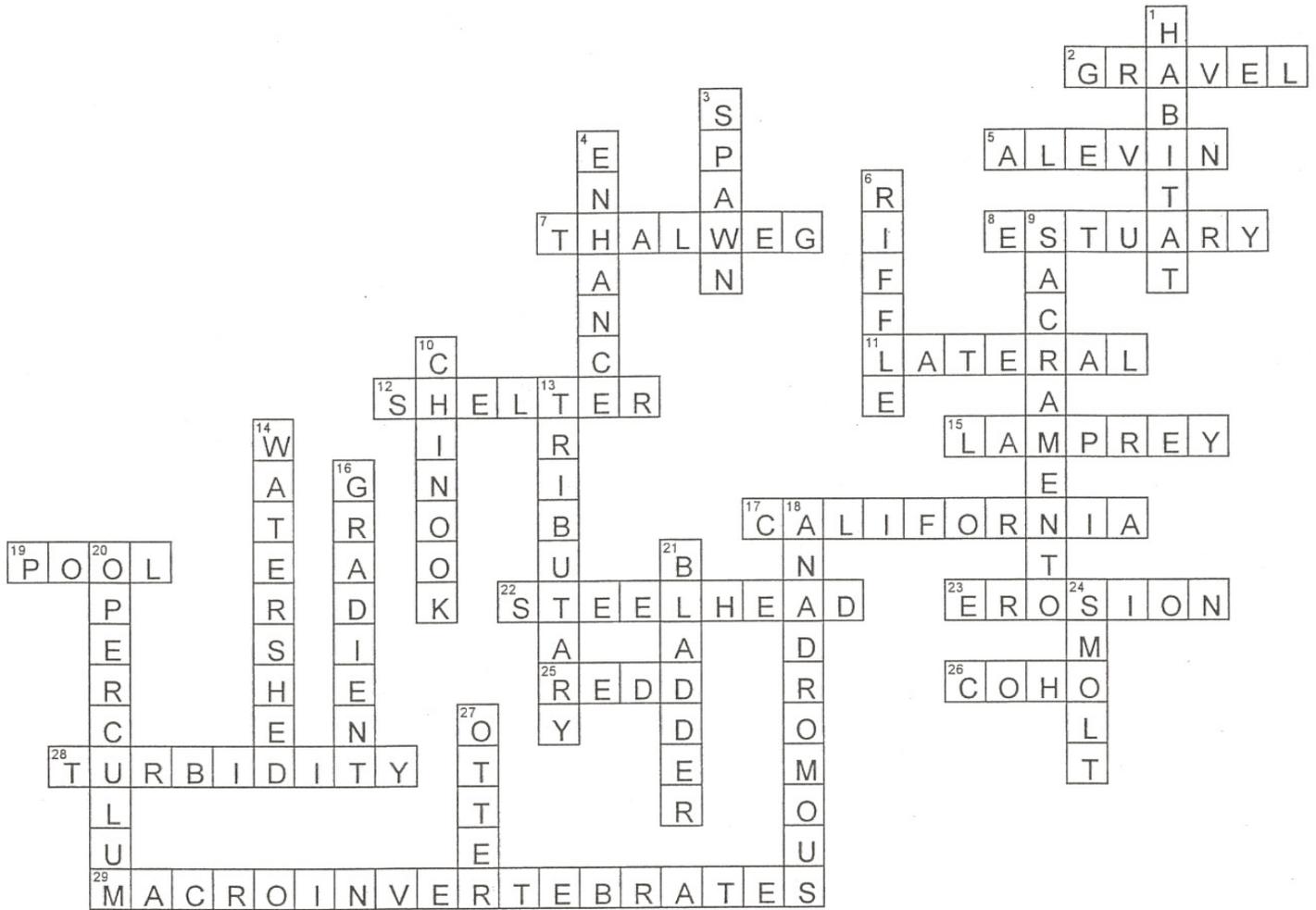


Bank Swallow surveys 2011



Ameriflare! 2012

Crossword Puzzle Answer Key



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**Jody Weseman - Interim Program Manager/
Region II Program Coordinator
Zia Schatz - Region I Program Coordinator
Stephanie Birmingham - Member Coordinator/
Office Manager**